

Rocky Mountain Spotted Fever (tick-borne typhus fever)

What is Rocky Mountain spotted fever?

Rocky Mountain spotted fever (RMSF) is a tick-borne disease caused by a rickettsia (a microbe that differs somewhat from bacteria and virus). Fewer than 50 cases are reported annually in New York state.

Who gets RMSF?

In the eastern United States, children are infected most frequently, while in the western United States, disease incidence is highest among adult males. Disease incidence is directly related to exposure to tick-infested habitats or to infested pets. Most of the cases in New York state have occurred on Long Island.

How is RMSF transmitted?

RMSF is spread by the bite of an infected tick. In New York, the American dog tick (*dermacentor variabilis*) is the most common vector. It can also be transmitted by contamination of the skin with tick blood or feces. Person-to-person spread of RMSF does not occur.

What are the symptoms of RMSF?

RMSF is characterized by a sudden onset of moderate to high fever (which can last for two or three weeks), severe headache, fatigue, deep muscle pain, chills and rash. The rash begins on the legs or arms, may include the soles of the feet or palms of the hands and may spread rapidly to the trunk or rest of the body.

When do symptoms appear?

Symptoms usually appear within two weeks of the bite of an infected tick.

Does past infection with RMSF make a person immune?

One attack probably provides permanent immunity.

What is the treatment for RMSF?

Certain antibiotics such as tetracycline or chloramphenicol may be effective in treating the disease.

What can be done to prevent RMSF?

When in tick-infested habitat - wooded and grassy areas - take special precautions to prevent tick bites, such as wearing light-colored clothing (for easy tick discovery) and tucking pants into socks and shirt into pants. Check after every two to three hours of outdoor activity for ticks on clothing or skin. Brush off any ticks on clothing before skin attachment occurs. A thorough check of body surfaces for attached ticks should be done at the end of the day. If removal of attached ticks occurs within 36 hours, the risk of tick-borne infection is minimal.

Repellents can be effective at reducing bites from ticks that can transmit disease. But their use is not without risk of health effects, especially if repellents are applied in large amounts or improperly.

Repellents commonly available to consumers contain the active ingredients DEET (N, N-diethyl-m-toluamide), permethrin, or botanical oils. DEET products have been widely used for many years, but have occasionally been associated with health effects. Skin reactions (particularly at DEET concentrations of 50 percent and above) and eye irritation are the most frequently reported health problems. Products containing permethrin are for use on clothing only, not on skin. Rather than acting as a repellent, permethrin kills ticks and insects that come in contact with treated clothes. Permethrin can cause eye irritation. Insect repellents containing botanical oils, such as oil of geranium, cedar, lemongrass, soy or citronella are also available, but there is limited information on their effectiveness and toxicity. **If you decide to use a repellent, use only what and how much you need for your situation. In addition:**

- Be sure to follow label directions.
- Use repellents only in small amounts, avoiding unnecessary repeat application. Try to reduce the use of repellents by dressing in long sleeves and pants tucked into socks or boots.
- Children may be at greater risk for reactions to repellents, in part, because their exposure may be greater. Do not apply repellents directly to children. Apply to your own hands and then put it on the child.
- Do not apply near eyes, nose or mouth and use sparingly around ears. Do not apply to the hands of small children.
- After returning indoors, wash treated skin with soap and water.

How should a tick be removed?

Grasp the mouthparts with tweezers as close as possible to the attachment (skin) site. Be careful not to squeeze, crush or puncture the body of the tick, which may contain infectious fluids. After removing the tick, thoroughly disinfect the bite site and wash hands. See or call a doctor if there are concerns about incomplete tick removal. Do not attempt to remove ticks by using petroleum jelly, lit cigarettes or other home remedies because these may actually increase the chance of contracting a tick-borne disease. You may want to send the tick to the New York State Health Department's Tick Identification Service, c/o HVCC Central Receiving, 80 Vandenburg Avenue, Troy, NY 12180.

How do I obtain information on a tick?

Tick identification services are available through the New York State Department of Health and some county health departments. The New York State Department of Health Tick Identification Service will tell you the species of the tick, whether it is engorged with blood and, if so, how long it may have been feeding. The Tick Identification Service will also report whether the mouthparts are present (if not, they may have remained in the skin and need to be removed, as you would a splinter). The Tick Identification Service **will not** tell you whether the tick is infected with disease-causing organisms. There is no charge for this service.

If you wish to have a tick identified, place it in a small jar containing rubbing alcohol, seal the container to prevent leakage and complete the Tick Identification Submittal Form. Mail the tick in the sealed container, along with the completed submittal form, to the New York State Health Department's Tick Identification Service, c/o HVCC Central Receiving, 80 Vandenburg Avenue, Troy, NY 12180. Once you send a tick to be identified it will not be returned.

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